

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-4. (Canceled)

5. (Previously Presented) A method for use in encoding input video data, comprising:

determining a relationship between metric values generated from reference video data using a metric function and respective first encoding parameters, and quantities of encoded video data generated by encoding said reference video data using said respective first encoding parameters;

using said metric function to generate metric values from said input video data and respective second encoding parameters;

selecting at least one of said second encoding parameters on the basis of a desired quantity of encoded video data and said relationship; and

under control of at least one of a configured hardware circuit and a configured computer, encoding said input video data using the selected at least one encoding parameter,

wherein said metric function is a spatial activity metric function based on a sum of weighted AC discrete cosine transformation coefficients and is of the form,

$$\sum_{u,v} \frac{|f(u,v)|}{w(u,v)q(u,v)},$$
 where $f(u,v)$ is a discrete cosine transformation coefficient of a block element with coordinates (u, v) , $w(u,v)$ is a weight for said coefficient, and $q(u,v)$ is a quantization parameter for said coefficient.

6. (Previously Presented) A method as claimed in claim 5, wherein said relationship is a power law relationship.

7. (Previously Presented) A method as claimed in claim 5, wherein said metric function is based on AC coefficients of discrete cosine transformation data generated from said video data.

8-9. (Canceled)

10. (Previously Presented) A method for use in encoding input video data, comprising:

determining a relationship between metric values generated from reference video data using a metric function and respective first encoding parameters, and quantities of encoded video data generated by encoding said reference video data using said respective first encoding parameters;

using said metric function to generate metric values from said input video data and respective second encoding parameters;

selecting at least one of said second encoding parameters on the basis of a desired quantity of encoded video data and said relationship; and

under control of at least one of a configured hardware circuit and a configured computer, encoding said input video data using the selected at least one encoding parameter,

wherein said metric function is a spatial activity metric function based on a sum of weighted AC discrete cosine transformation coefficients and is of the form,

$$\sum_{u,v} \frac{|f(u,v) * h(u,v)|}{w(u,v)q(u,v)} =$$
, where $f(u,v)$ is a discrete cosine transformation coefficient of a block element with coordinates (u, v) , $w(u,v)$ is a weight for said coefficient, $q(u,v)$ is a quantization parameter for said coefficient, and $h(u,v)$ is a spatial weighting factor for said coefficient.

11. (Previously Presented) A method as claimed in claim 5, wherein metric values are determined for each 8x8 pixel block of said video data using said metric function.

12. (Original) A method as claimed in claim 11, including determining a metric value for a macroblock by summing metric values for the constituent 8x8 pixel blocks.

13. (Previously Presented) A method as claimed in claim 5, including determining basic metric values from said metric function and basic encoding parameters, and deriving metric values from said basic metric values.

14. (Original) A method as claimed in claim 13, including deriving said metric values from said basic metric values using shift and add operations.

15. (Withdrawn) A method as claimed in claim 5, wherein said metric function is based on the number of non-zero AC discrete cosine transformation coefficients after quantization.

16. (Withdrawn) A method as claimed in claim 15, wherein said metric function is used to determine metric values for a macroblock of six 8x8 pixel blocks.

17-24. (Canceled)

25. (Currently Amended) ~~The A video encoding module of claim 17~~ for use in encoding input video data, comprising:

means for determining a relationship between metric values generated from reference video data using a metric function and respective first encoding parameters, and quantities of encoded video data generated by encoding said reference video data using said respective first encoding parameters, during a calibration process;

means for storing said relationship;

means for using said metric function to generate metric values from said input video data and respective second encoding parameters; and

means for selecting at least one of said second encoding parameters on the basis of a desired quantity of encoded video data and said relationship,

wherein said metric function is a spatial activity metric function based on a sum of weighted AC discrete cosine transformation coefficients and is of the form,

$$\sum_{u,v} \frac{|f(u,v)|}{w(u,v)q(u,v)}, \text{ where } f(u,v) \text{ is a discrete cosine transformation coefficient of a block}$$

element with coordinates (u, v) , $w(u,v)$ is a weight for said coefficient, and $q(u,v)$ is a quantization parameter for said coefficient.

26. (Currently Amended) ~~The~~ A video encoding module ~~of claim 17 for use in~~
encoding input video data, comprising:

means for determining a relationship between metric values generated from reference video data using a metric function and respective first encoding parameters, and quantities of encoded video data generated by encoding said reference video data using said respective first encoding parameters, during a calibration process;

means for storing said relationship;

means for using said metric function to generate metric values from said input video data and respective second encoding parameters; and

means for selecting at least one of said second encoding parameters on the basis of a desired quantity of encoded video data and said relationship,

wherein said metric function is a spatial activity metric function based on a sum of weighted AC discrete cosine transformation coefficients and is of the form,

$$\sum_{u,v} \frac{|f(u,v)*h(u,v)|}{w(u,v)q(u,v)}, \text{ where } f(u,v) \text{ is a discrete cosine transformation coefficient of a block}$$

element with coordinates (u, v) , $w(u,v)$ is a weight for said coefficient, $q(u,v)$ is a quantization parameter for said coefficient, and $h(u,v)$ is a spatial weighting factor for said coefficient.

27-29. (Canceled)